```
> restart;
> S:=Sum(1/n!,n=0..N);
```

$$S := \sum_{n=0}^{N} \frac{1}{n!} \tag{1}$$

```
> 0!;
```

$$1 \tag{2}$$

```
> S5:=subs(N=5,S);
```

$$S5 := \sum_{n=0}^{5} \frac{1}{n!} \tag{3}$$

```
> value(S5);
```

$$\frac{163}{60} \tag{4}$$

```
> evalf(S5);
```

$$2.716666667 \tag{5}$$

```
> S10:=subs(N=10,S);
```

$$S10 := \sum_{n=0}^{10} \frac{1}{n!} \tag{6}$$

```
> value(S10);
```

$$\frac{9864101}{3628800} \tag{7}$$

```
> evalf(S10);
```

$$2.718281801 \tag{8}$$

```
> R10:=3/(10+1)!;
```

$$R10 := \frac{1}{13305600} \tag{9}$$

```
> evalf(R10);
```

$$7.515632516\ 10^{-8} \tag{10}$$

```
> evalf(3/(13+1)!);
```

$$3.441223679\ 10^{-11} \tag{11}$$

```
> evalf(exp(1));
```

$$2.718281828 \tag{12}$$

```
> A1:=limit(S,N=infinity);
```

$$A1 := \sum_{n=0}^{\infty} \frac{1}{n!} \tag{13}$$

```
> value(A1);
```

$$e \tag{14}$$

```
>
```